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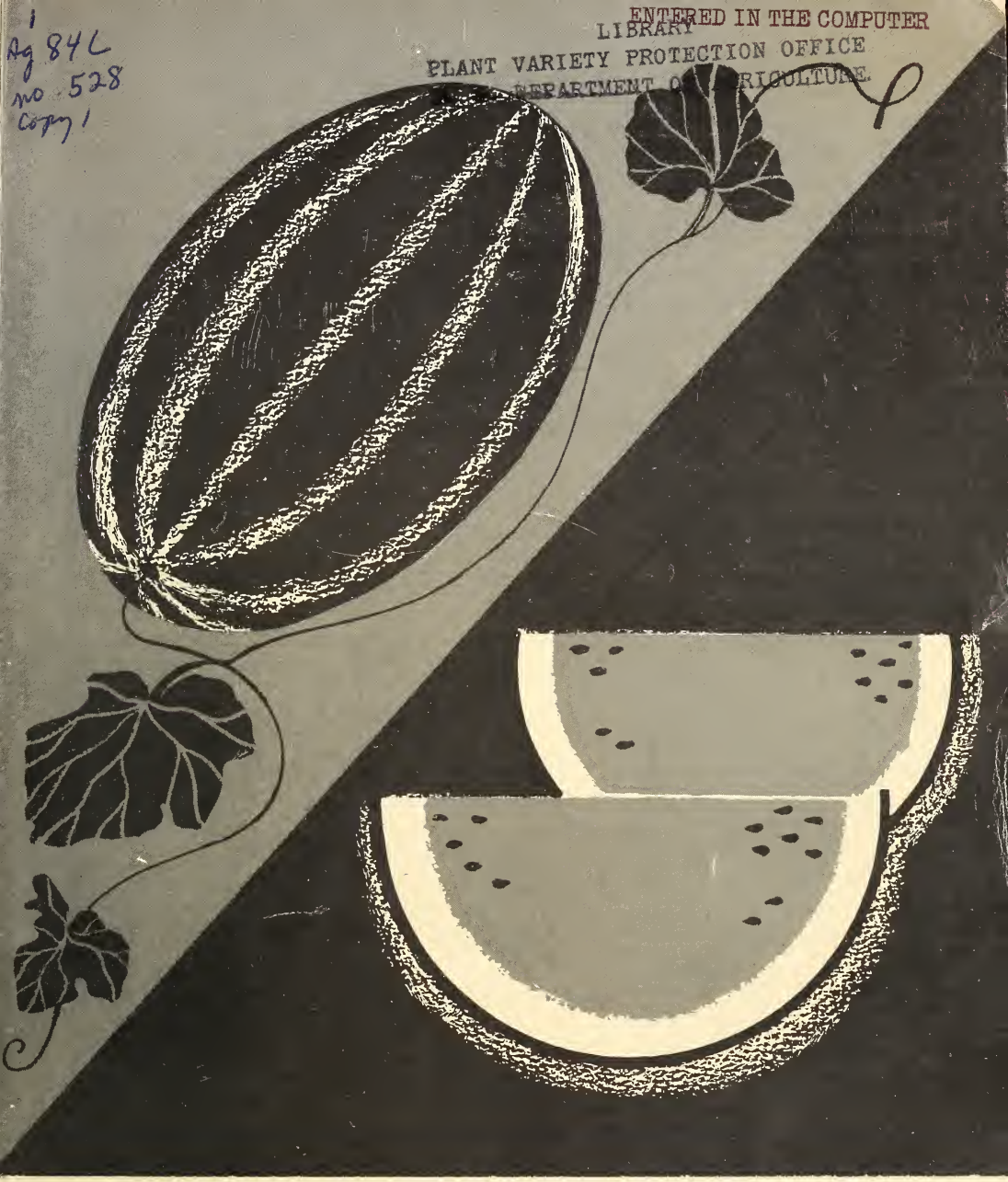

WATERMELONS
FOR THE GARDEN

U.S. Department of Agriculture • Leaflet No. 528

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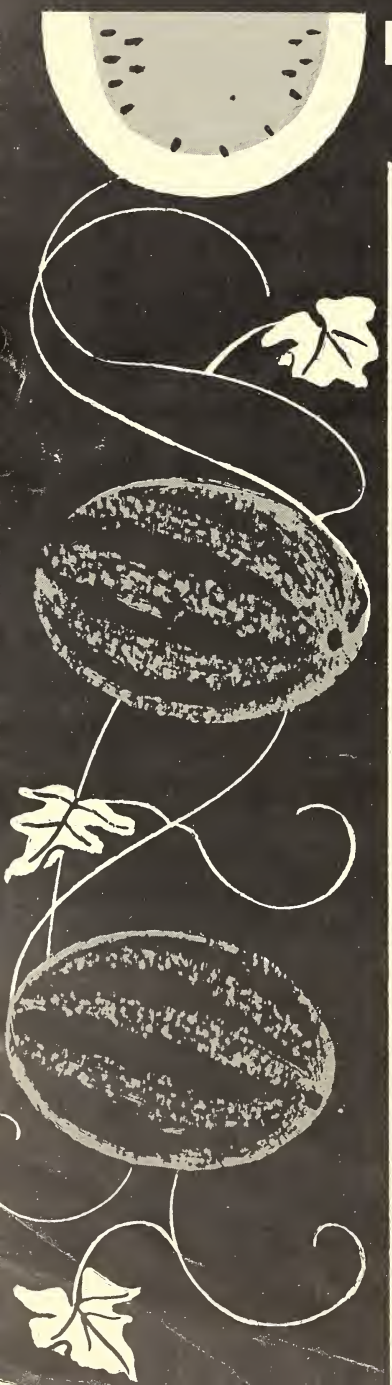

Information for this publication was furnished by the Crops Research Division, Agricultural Research Service

Watermelons are warm-weather plants. They grow best on rich, well-drained sandy loam soils in hot climates. In cooler climates, they grow best on light sandy loam soils that become warm early in the spring. Usually, 85 days or more of warm weather are needed for successful growth and maturity of fruit.

Leaf diseases may cause severe damage in humid climates. However, watermelon varieties are available that can be grown successfully in any good garden soil wherever the growing season is long and warm enough.

VARIETIES

Choose watermelon varieties that are adapted to your area. For best results, follow variety recommendations of your county agricultural agent or your State agricultural experiment station.

The accompanying table lists some favorite varieties accord-

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Characteristics of watermelon varieties by geographic area

Variety	Season	Disease resistance		Melon characteristics	
		Anthracnose	Fusarium wilt	Size [1]	Distinguishing features [2]
Southern States					
	Days				
Blackstone	95	Resistant	Susceptible	Large	Round. Rind dark green.
Charleston Gray	85	Very resistant.	Resistant	Large	Oblong. Rind light gray-green.
Congo	90	Resistant	Susceptible	Large	Oblong. Rind medium green with dark stripes.
Dixie Queen, Wilt Resistant.	85	Susceptible	Resistant	Large	Nearly round. Rind light green with dark stripes.
Fairfax	85	Resistant	Resistant	Large	Oblong. Rind light green with dark stripes.
Florida Giant	90	Susceptible	Susceptible	Large	Nearly round. Rind dark green, slightly ribbed.
Garrison	85	Susceptible	Susceptible	Large	Oblong. Rind pale green with darker green stripes.
Garrisonian	85	Resistant	Resistant	Large	Oblong. Rind light light green with dark stripes.
Stone Mountain	90	Susceptible	Susceptible	Large	Nearly round. Rind medium green.
North Central and Northeastern States					
Charleston Gray	95	Very resistant.	Resistant	Large	Oblong. Rind light gray-green.
Hawkesbury, Purdue Strain.	95	Susceptible	Resistant	Large	Oblong. Rind light gray-green with green veins. Flesh dark pink.
Kleckley Sweet	90	Susceptible	Susceptible	Large	Oblong. Rind dark blue-green.
Kleckley Sweet No. 6.	90	Susceptible	Resistant	Large	Oblong. Rind dark blue-green.
New Hampshire Midget.	80	Susceptible	Susceptible	Small	Oval. Rind medium green with darker stripes.
Rhode Island Red	89	Susceptible	Susceptible	Small	Oval. Rind light green with darker stripes.
Sugar Baby	85	Susceptible	Susceptible	Small	Round. Rind medium green.
California and Arizona					
Baby Klondike	92	Susceptible	Resistant	Small	Nearly round. Rind even green.
Charleston Gray	85	Very resistant.	Resistant	Large	Oblong. Rind dark green.
Klondike Black Seeded	85	Susceptible	Susceptible	Medium	Oblong. Rind dark green, furrowed lengthwise. Flesh dark pink.
Klondike R-7	85	Susceptible	Very resistant.	Medium	Oblong. Rind dark green. Flesh dark pink.
Klondike Striped	85	Susceptible	Resistant	Medium	Oblong. Rind light green with dark green stripes. Flesh yellow-red.
Klondike Striped Blue Ribbon.	85	Susceptible	Resistant	Medium	Oblong. Rind light green with dark green stripes. Flesh yellow-red.
Peacock Improved	90	Susceptible	Susceptible	Medium	Oblong. Rind dark green. Flesh orange-red.

[1] *Large: More than 30 pounds, or over 20 inches long. Medium: 12 to 29 pounds, or 10 to 19 inches long. Small: Less than 13 pounds, or less than 10 inches long.*

[2] *Unless stated otherwise, ripe watermelon flesh is red.*

FOR BEST RESULTS IN GROWING WATERMELONS

- Buy seed from a reputable source.
- Select varieties adapted to your area.
- Prepare the soil at least 2 weeks in advance of planting.
- Plant after all danger of frost is past or use plant covers over early seeded hills.
- Keep the planting weed free.
- Irrigate when needed.
- Protect the planting against diseases and insect pests.

ing to the areas where they are grown. Information on disease resistance and melon characteristics is included.

FERTILIZER AND LIME

Commercial fertilizers are almost always needed for growing watermelons successfully. Usually, a good garden fertilizer for your locality is satisfactory.

Needs for fertilizer vary so widely that specific recommendations cannot be given. Have your soil tested for fertilizer needs before planting. For testing information, consult your agricultural agent or your State agricultural experiment station.

Watermelons do best in soils that are generously supplied with organic matter. In spring, immediately after soil preparation, thoroughly work into each hill a spadeful of well-rotted manure or compost or 1 to 2 pounds of dehydrated manure.

Although acid soils are not needed for successful production, watermelons grow well on them. Lime need not be added to soils that test pH 5.0 or higher.

In a typical fertilizing program, apply 1 to 1-1/2 cups of mixed fertilizer (5–10–5, 5–10–10, or 4–8–8) twice to each hill. Work the first application of fertilizer into the hill at planting time. Later, apply a side dressing to each hill when the runners are 12 to 18 inches long. Spread the fertilizer 6 to 8 inches away from the plant and along each side of the hill.

CULTURE

Preparing the Soil: Prepare the soil early enough for it to settle by planting time. If your land has been in sod or other

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If you plant watermelons under paper or plastic covers, be sure to tear out the downwind end of the covers to provide ventilation. Remove the covers when danger of frost is past.

vegetation, plow in the fall or winter to allow turned-under material time to decay. If the soil is subject to erosion in the winter, turn under the vegetation as early as possible in the spring. If you have no vegetation to turn under, then plow, spade, or powertill the soil 2 to 3 weeks before planting.

The watermelons must be grown on raised beds if the soil is poorly drained and subject to heavy rains during the growing season, or if the crop is to be furrow irrigated. Form the beds 2 to 3 weeks before planting time. Space them 8 to 10 feet from center to center and with drainage furrows between them. Bed the soil 6 to 12 inches high from the peak to the bottom of the intervening furrow.

Just before planting, go over the soil lightly with a rotary tiller or smooth the surface with a rake.

Planting: Poor seed is often responsible for failures of watermelon crops. Be sure that your seed comes from a reliable source. Store it in a dry place until planting time.

If you wish to plant watermelons in the open—without covers—delay seeding until after the frost-free date. The seed will germinate poorly if soil temperature is under 70°, and young plants are easily hurt by frost. If, to get an early start, you plan to use plant covers, coldframes, or hotbeds, plant no sooner than 1 month before the frost-free date. Your county agricultural agent or State agrucultural experiment station can tell you the average frost-free date for your locality.

Plant covers, made from glassine, paper, or plastic, are available from garden supply dealers. The covers, with their downwind end open for ventilation, are placed over the seeded hills and left in place until danger of frost is past.

If you start your watermelon plants in peat pots in coldframes or hotbeds, transplant them to the hills after the frost-free date.

For both irrigated or non-irrigated crops, space the hills 8 to 10 feet apart in each direction.

Using a spading fork or a hoe, pulverize the earth over an area 2 feet in diameter where each hill is to be located. Mix fertilizer in the pulverized soil. Smooth the fertilized area and cover it lightly with field soil. Place six or seven seeds in each hill. If you are seeding before the frost-free date, keep the seeds close enough together to be roofed over with a plant cover.

Cover the seeds with 1 inch of soil and firm the hills with your hand or the back of a hoe.

Thinning: Thin the seedlings twice. When one or two true leaves have appeared between the seed leaves, thin the plants to three or four per hill. After 1 or 2 more weeks, thin them to one or two widely spaced plants per hill. In row plantings, leave one plant every 6 or 8 feet after the two thinnings. Cut, do not pull, plants being removed at the second thinning; pulling may disturb the roots of those remaining.

Fruit Thinning: When the largest melons on each vine are 3 to 4 inches long, remove all poorly shaped, diseased, or late-maturing melons. Leave only one or two melons on each vine of large-fruiting varieties, or four to six melons on vines of icebox varieties. The remaining melons should be large and well shaped when mature.

To prevent spread of the fungus that causes anthracnose, thin fruits only when the vines are dry.

Cultivation: To control weeds, three or four cultivations may be needed. Begin cultivating a few days after watermelon plants emerge. Work lightly; watermelons are shallow rooted and deep cultivation may injure their roots. Before the fruit is set, train the vines in rows; this will allow cultivation in one direction until the melons are two-thirds grown.

Irrigating: In most areas, rainfall provides enough moisture for watermelon plants. During a drought, however, the plants should be irrigated every 10 to 12 days to maintain steady growth.

Do not use a sprinkler to irrigate; wet watermelon foilage is susceptible to leaf spot diseases. Run water through the furrows between the hills or use a soaker hose in the furrows.

When irrigating, soak the soil thoroughly. Begin by soaking the soil before planting, then plant as soon as the ground has dried sufficiently. Later, irrigate when the plants first tend to wilt during the day or when they cease vigorous growth.

For further details about irrigation practice, consult your county agricultural agent or State agricultural experiment station.

HARVESTING

Watermelons should be harvested when they are fully ripe and sweet, but not so overmature that the flesh next to the seeds has lost its characteristic firmness. Varieties differ in color and hardness at maturity.

When the melons are ripe, the rind changes color. The part of the rind that is on the ground changes from white to pale yellow.

Handle the melons carefully to avoid bruising them; never drop them and do not pile them more than three fruits high. Bruising damages the flesh inside and hurts the appearance and eating quality of cut sections.

DISEASES

The most serious diseases of watermelon are anthracnose, fusarium wilt, downy mildew, gummy stem blight, and root-knot. They attack watermelons in most of the major growing areas, but can be controlled by good seed of suitable varieties, good cultural practices, and use of fungicides.

To control anthracnose and fusarium wilt, buy high-quality, disease-free seed of varieties resistant to these diseases.

Treat the seed with thiram or chloranil dust to prevent decay in the soil and protect the seedlings from anthracnose and gummy stem blight. To treat the quantity of seed in a packet, add to packet as much dust as you can get on the tip one-fourth inch of the small blade of a pocket knife. Then shake the packet thoroughly.

Directions on the fungicide package will tell you how much dust to use for treating a large quantity of seed. Place dust and seed in a closed container, then shake it and turn it end over end for 1 to 2 minutes.

Plant where watermelons, muskmelons, squashes, cucumbers, or pumpkins have not been grown for at least 3 years. This rotation will help control anthracnose, fusarium wilt, gummy stem blight, and root-knot.

Watermelon plant in late stage of fusarium wilt. M-4139

To protect the plants from anthracnose, downy mildew, and gummy stem blight, apply sprays of maneb or zineb, alternating with sprays of a fixed copper compound.

Start spraying 6 to 8 weeks after planting, and continue until a week before harvest begins. Apply once every 10 days during dry weather and once every 7 days during wet weather.

For descriptions, ranges, and control measures for individual diseases, see Home and Garden Bulletin 46, "Insects and Diseases of Vegetables in the Home Garden." This publication is available from the U.S. Department of Agriculture, Washington, D.C. 20250.

Your county agricultural agent or State agricultural experiment station can tell you which diseases are a problem in your locality.

INSECTS

Watermelons can usually be grown without much injury from insects although many species feed on them. For further information, see Home and Garden Bulletin 46, "Insects and Diseases of Vegetables in the Home Garden."

If you apply insecticides, wait until late afternoon to avoid killing bees that pollinate the melons.

PRECAUTIONS

Pesticides improperly used may be injurious to man and animals. Use them only when needed and handle them with care. Follow the directions and heed all precautions on the labels.

Keep pesticides in closed, well-labeled containers in a dry place. Store them where they will not contaminate food or feed, and where children and animals cannot reach them.

When handling a pesticide, wear clean, dry clothing.

Avoid repeated or prolonged contact of pesticide with your skin.

Wear protective clothing and equipment if specified on the container label. Avoid prolonged inhalation of pesticide dusts or mists.

Avoid spilling pesticide concentrate on your skin, and keep it out of your eyes, nose, and mouth. If you spill any on your skin, wash it off immediately with soap and water. If you spill it on your clothing, launder the clothing before wearing it again.

After handling a pesticide, do not eat, drink, or smoke until you have washed your hands and face. Wash your hands and face and any other exposed skin immediately after applying pesticide.

To protect water resources, fish, and wildlife, do not contaminate lakes, streams, or ponds with pesticide. Do not clean spraying equipment or dump excess spray material near such water.

To protect honey bees and other pollinating insects that are necessary in the production of watermelons and other cucurbits, apply pesticide during the late afternoon when the insects are not visiting the plants.

Avoid drift of pesticide to nearby bee yards, crops, or livestock.

Dispose of empty pesticide containers at a sanitary land-fill dump, or bury them at least 18 inches deep in a level, isolated place where they will not contaminate water supplies. If you have trash-collection service, wrap small containers in heavy layers of newpapers and place them in the trash can.

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